



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/009,051	04/22/2002	Stefan-Horea Culca	20798/0204662-US0	4397
7278	7590	08/13/2007	EXAMINER LUGO, DAVID B	
DARBY & DARBY P.C. P.O. BOX 770 Church Street Station New York, NY 10008-0770			ART UNIT 2611	PAPER NUMBER
MAIL DATE 08/13/2007		DELIVERY MODE PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

EJK

Office Action Summary	Application No.	Applicant(s)	
	10/009,051	CULCA, STEFAN-HOREA	
	Examiner	Art Unit	
	David B. Lugo	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 11 June 2007.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 10-23 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 21 and 22 is/are allowed.
- 6) Claim(s) 10-16, 18 and 20 is/are rejected.
- 7) Claim(s) 17, 19 and 23 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/11/07 has been entered.

Response to Arguments

2. Applicant's arguments filed 6/11/07 have been fully considered but they are not persuasive.

Regarding claim 10, Applicant argues that Spracklen in combination with Price do not disclose or suggest that the data transmission line is directly connected to the circuit parts. However, the Examiner disagrees that Spracklen does not disclose the amended limitations of the “data transmission line directly connects the first transmitter circuit part, first receiver part, second transmitter part, and second receiver circuit for bidirectional transmission.”

Applicant argues that instead, the RX and TX circuits are connected to each other via the bus control 21. However, bus control 21 connects the receive and transmit parts to a resident computer of node 11, as the interface is between the computer and *the channel* (col. 5, lines 34-35). Each node includes a resident computer, a transmitter and a receiver (Figs. 4A-4C). Between the bus control 21 and the channel are a transmitter that *transmits* packets *over the channel* and a receiver that *receives* packets *from the channel* (col. 5, lines 39-43). Accordingly, both the transmitter and receiver of a node are connected directly to the communication channel,

via terminals TXD (Fig. 4B) and RXD (Fig. 4C), respectively. Also, as shown in Figure 1, nodes 11 are connected to one another via transmission line 10. Each of the nodes 11 thus include a transmitter part (Fig. 4B) and a receiver part (Fig. 4C), where one skilled in the art would recognize that a transmitter of a first node transmits to a receiver of a second node, and a transmitter of the second node transmits to a receiver of the first node. Thus two nodes include two transmitter parts and two receiver parts, all of which are connected to the transmission channel. Therefore, Spracklen, in combination with Price disclose all of the limitations of claim 10. The rejection of claims 10-16, 18 and 20 are maintained, and are restated below. Newly added claims 22 and 23 are also considered below.

Specification

3. A substitute specification excluding the claims is required pursuant to 37 CFR 1.125(a) because the nature of the amendments render it difficult to arrange the papers for printing.

A substitute specification must not contain new matter. The substitute specification must be submitted with markings showing all the changes relative to the immediate prior version of the specification of record. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived. An accompanying clean version (without markings) and a statement that the substitute specification contains no new matter must also be supplied. Numbering the paragraphs of the specification of record is not considered a change that must be shown.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 10-16, 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spracklen et al. U.S. Patent 4,337,465 in view of Price et al. U.S. Patent 5,736,796.

Regarding claim 10, Spracklen discloses a data transmission system comprising a first unit or transceiver communicating with a second unit or transceiver (i.e. nodes 11 – Fig. 1), where each unit includes an interface having a transmitter circuit part connected to a transmitter terminal (TXD) as shown in Figure 4B, and a receiver circuit part having a receiver terminal (RXD) as shown in Figure 4C, where the unit transmits and receives data over the transmission line and are directly connected to the line 10 via terminals TXD (Fig. 4B) and RXD (Fig. 4C), respectively, for communicating with other transceivers, and where the transceivers are connected to each other via the transmission line, as shown in Figure 1. Spracklen further shows a current source, shown in Figure 7, that feeds current into the transmission line (col. 7, lines 16-18) so that a first signal state of the receiver of the first circuit part (i.e. SYNC WAIT state) is capable of being changed as a function of a second signal state of the transmitter of second circuit part (i.e. PACKET state), and a third signal state of the receiver of the second circuit part (i.e. SYNC WAIT state) is capable of being changed as a function of a fourth signal state of the transmitter of first circuit part (i.e. PACKET state), as Spracklen discloses that when data is to be transmitted, the transceiver is in a SYNC WAIT state while it checks to see if the channel is IDLE (see state diagram - Fig. 3A), and if the channel is not IDLE (i.e. the channel is in a packet-being-transmitted state meaning the other transceiver is in a PACKET state), then the

transceiver remains in the SYNC WAIT state, otherwise it moves to the PACKET state. Further, the second transceiver (second circuit part) operates in a complementary fashion. Spracklen does not expressly show terminals at each circuit part for a reference potential line.

Price discloses a communication system in Figure 4 where two communication units are connected via a transmission line 72 and a reference potential line (i.e. GND). It would have been obvious to one of ordinary skill in the art to employ the teachings of Price of using a reference potential line in the system of Spracklen in order to provide a common path to ground, as is well known in electrical circuit design.

Regarding claim 11, each of the transceivers is described as being associated with a resident computer (col. 5, lines 25-27), where the computer inherently includes a display and a processor, and further includes an operating control unit (bus control 21 – Fig. 4A), and a plurality of signal inputs and outputs as shown in Figures 4A-4C. Spracklen does not expressly state that the components are disposed in a common housing. However, it is well known in the art to provide components in a single housing to reduce the length of the lines connecting the components. Therefore, it would have been obvious to one of ordinary skill in the art to implement the components in a common housing in order to reduce the length of the lines connecting the components thereby eliminating noise associated with long transmission lines.

Regarding claim 12, it is well known in the art for computers to include processing units having microcontrollers. It would have been obvious to one of ordinary skill in the art to use microcontrollers in the computers of Spracklen as a matter of design consideration.

Regarding claim 13, the transceiver is described as being associated with a resident computer (col. 5, lines 25-27), where the computer inherently includes a display and a processor,

and further includes an operating control unit (bus control 21 – Fig. 4A), and a plurality of signal inputs and outputs as shown in Figures 4A-4C, wherein the second transceiver is considered to expand a function of the first unit. Spracklen does not expressly state that the components are disposed in a common housing. However, it is well known in the art to provide components in a single housing to reduce the length of the lines connecting the components. Therefore, it would have been obvious to one of ordinary skill in the art to implement the components in a common housing in order to reduce the length of the lines connecting the components thereby eliminating noise associated with long transmission lines.

Regarding claim 14, it is well known in the art for computers to include processing units having microcontrollers. It would have been obvious to one of ordinary skill in the art to use microcontrollers in the computers of Spracklen as a matter of design consideration.

Regarding claim 15, Spracklen shows in Figure 7 that the current source is integrated in the unit.

Regarding claim 16, Spracklen shows in Figure 7 that the transceivers include a semiconductor switch (transistor 55).

Regarding claim 18, Spracklen states that the current source is a constant current source (col. 7, lines 16-19).

Regarding claim 20, Spracklen shows in Figure 7 that the current source includes an ohmic resistor 57 connected to a supply potential 56 with a first end, and to the data transmission line via transformer 44 with a second end thereof.

Allowable Subject Matter

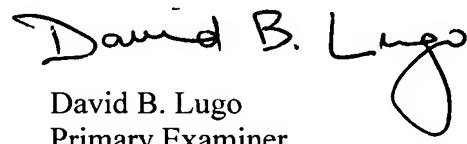
6. Claims 17, 19 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. Claims 21 and 22 are allowed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David B. Lugo whose telephone number is 571-272-3043. The examiner can normally be reached on M-F; 9:30-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on 571-272-3066. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


David B. Lugo
Primary Examiner